Abstract. A stratified random sampling by age groups was conducted to determine seroprevalence of Varicella-Zoster virus (VZV) in a Thai population. In 2014, 2,218 serum specimens were collected from healthy people less than 60 years of age across four provinces from four regions of Thailand who attended pediatric and internal medicine units. Patients with chronic illness, undergoing immunosuppressive therapy or with clinical signs of infection with HIV or other immunodeficiency disorders were excluded. The overall seroprevalence of the sample population was 54.1%, with 27%, 50%, 89.6%, and 100% of those younger than 12, between 13 and 14, over 30, and over 50 years of age, respectively had anti-VZV antibodies. The proportion of VZV immunity increased rapidly in children from 5 to 9 years of age. The highest prevalence was among children attending kindergartens and primary schools. The findings were consistent with age groups reported in Thailand National Surveillance Database System. Because a significant proportion of teenage children currently susceptible to VZV could contract severe varicella and complications as adults, health-economic studies on cost-effectiveness and cost-benefit of VZV vaccine should be carried out to assist in decision making regarding introduction of such vaccines in Thailand.

Keywords: chickenpox, seroprevalence, seropositive rate, varicella antibody, Thailand